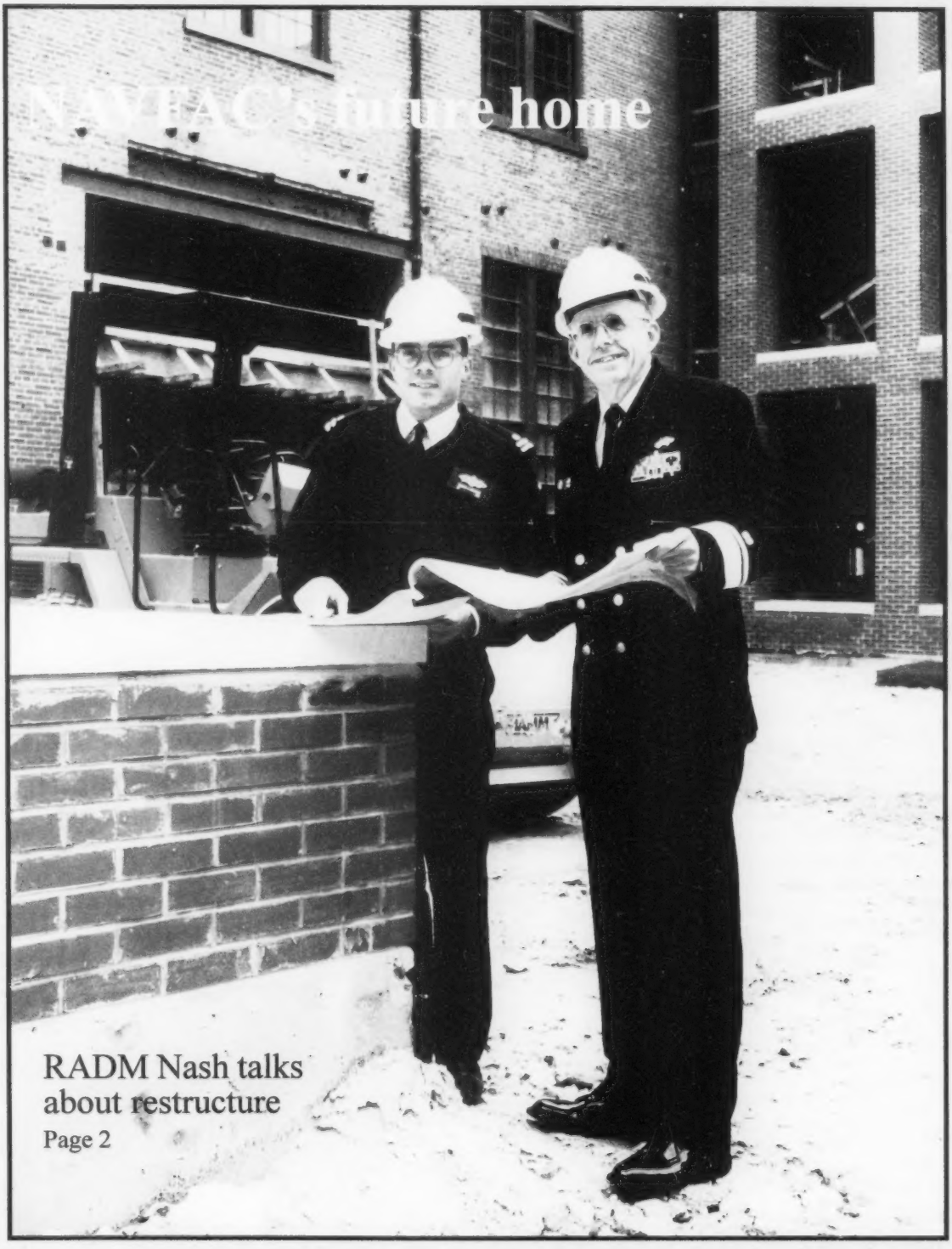
NAVY CIVIL ENGINEER
Winter 1997/1998 Vol. XXXVI Issue 1



NAVFAC's future home

RADM Nash talks about restructure

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UNITED STATES NAVY
NAVAL FACILITIES ENGINEERING COMMAND

UNITED STATES NAVY
CIVIL ENGINEER CORPS

SEABEES

Cover Photo:
Rear Admiral David J. Nash, Commander, Naval Facilities Engineering Command and Lieutenant Michael J. Zucchero, assistant resident officer in charge of construction, Naval District Washington, D.C., check on the renovation progress of the new headquarters building at the Washington Navy Yard. (Photo by Ken White)

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David J. Nash
Rear Admiral, CEC, USN
Commander,
Naval Facilities Engineering Command
and
Chief of Civil Engineers

Robert L. Moeller
Rear Admiral, CEC, USN
Vice Commander,
Naval Facilities Engineering Command
and
Deputy Chief of Civil Engineers

Elaine L. McNeil
Public Affairs Officer,
Naval Facilities Engineering Command

Sharon L. Luckett
Editor,
Navy Civil Engineer Magazine

Editorial Offices
The *Navy Civil Engineer* is published three times a year by the Naval Facilities Engineering Command, 200 Stovall Street, Alexandria, Va. 22332-2300. Telephone: (703) 325-7773, DSN 221- 7773 Fax: (703) 325-4408.

Subscriptions
Subscriptions to the *Navy Civil Engineer* are available from New Orders, Superintendent of Documents, P.O. Box 371954, Pittsburgh, Pa. 15250-7954. Price: $6.50 per year for domestic and $8.15 for foreign.

Address Changes
Send address changes to editorial and business offices: Naval Facilities Engineering Command, Attn: Editor, *Navy Civil Engineer* Magazine (Code PA), 200 Stovall Street, Alexandria, Va. 22332-2300.
Internet address luckettsl@hq.navfac.navy.mil. Telephone: (703) 325-7773, DSN 221-7773.

Address changes for paid subscriptions ordered through Superintendent of Documents should be sent to the Superintendent of Documents' address above.

Authorization
Issuance of the *Navy Civil Engineer* is approved in accordance with the Department of the Navy Publications and Printing Regulations, NAVSO P-35. It does not alter, amend or supersede official regulations, orders, or directives. Printing costs are charged to appropriated funds for maintenance and operations of NAVFAC.

The *Navy Civil Engineer* is intended for the information of regular and reserve personnel of the Civil Engineer Corps, United States Navy, and key civilian employees of NAVFAC, subordinate commands, and other mission-oriented activities.

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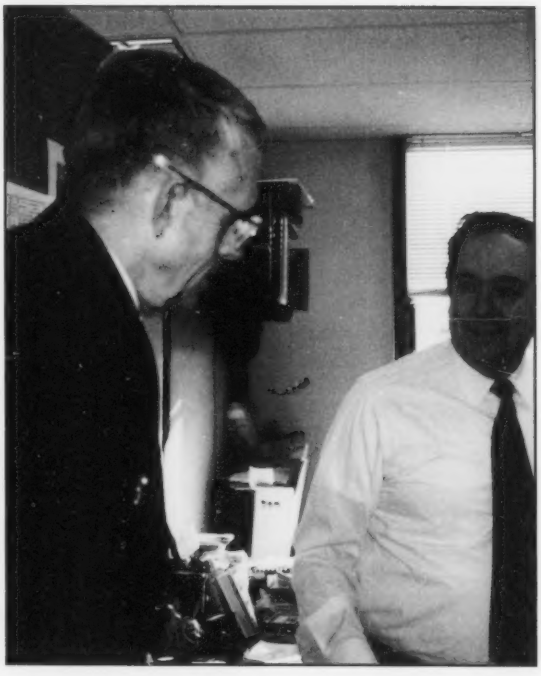
NAVFAC commander talks about restructure

Rick L. Landers, program analyst for the Seabee Division at Naval Facilities Engineering Command Headquarters, interviewed Rear Admiral David J. Nash, Commander, Naval Facilities Engineering Command and Chief of Civil Engineers, about the recent restructure of NAVFAC Headquarters.



Change management and leadership

LANDERS: In 1995, you and the NAVFAC team reached out to its customers and employees to identify opportunities where NAVFAC could improve both its internal processes and the quality of customer directed deliverables. As you began hearing customer/employee feedback, what pleased you the most and what were your major concerns?

NASH: I was very pleased with not only the number of responses we received, over 2,000 from our employees, but the willingness of everyone to offer valuable ideas, as well as identify problem areas and offer positive and constructive solutions. Clearly, both the customer interviews and employee suggestions showed us that we had opportunities to improve the way we do business and helped us build a smarter strategic business plan. One thing the interviews highlighted was our need to communicate more clearly and effectively. NAVFAC has the technical proficiency needed to support our customers, but we do need to listen better and work more closely with them to make sure we meet their expectations. We need to work jointly with our customers, as a unified team. What we can and must do is to reflect and act on the constructive and positive things we do and to smartly apply our resources in a manner that targets our customers' success. Very basically, we are changing our frame of reference and focusing on our customers' needs. This is both a fundamentally sound business practice and the right thing to do for the Navy.

LANDERS: After the NAVFAC team reviewed customer and employee feedback, it developed a road map to change NAVFAC in some fundamental ways. What were the top three priorities that you felt needed immediate action and what did you do?

NASH: First, we decided to address the long term improvements we needed to help our customers thrive in a more demanding era. Secondly, we realized that to keep ourselves motivated or energized for long term improvements, we needed to focus on short term results or fast successes. The third priority was to develop our organization in a way that would allow us to become more agile in the face of increasing challenges. By streamlining our processes, smartly applying new technologies, and taking care of customers and our own people, we will remain a relevant and vital member of the Navy team. We are working toward those goals, achieving some success, and are doing our part to help decrease Navy infrastructure costs to help recapitalize other Navy needs.

LANDERS: Around that same time, you began to position NAVFAC toward leveraging its resources to enhance our contributions to the Navy. And in November 1996, NAVFAC

began a downsizing initiative to decrease our employee rolls. What was the basis for the decrease in numbers and how did you reach the target?

NASH: I firmly believed that we could downsize and still take care of our business, without unduly disrupting services to our customers or hurting our employees. We all knew that we had to get smaller to better leverage Navy dollars for the warfighters. Our attrition rate has been motivated through the use of early out incentives. This has helped us avoid a reduction in force. I'm not saying this has been easy by any means. It is stressful to move to new jobs in new organizations. But, we tried to do this fairly and with compassion. For those who have chosen to take advantage of early retirement options or move on to other opportunities, I thank them all for their valuable contributions and dedicated service.

LANDERS: Through the organizational mapping process, NAVFAC reworked and rewired its organizational structure. Some employees feel that the process wasn't very scientific and left a lot of room for guessing and parochial gamesmanship, and some still can't figure out how the mapping and rebilleting or reduction of NAVFAC headquarters were linked. What are your thoughts regarding these concerns and perceptions?

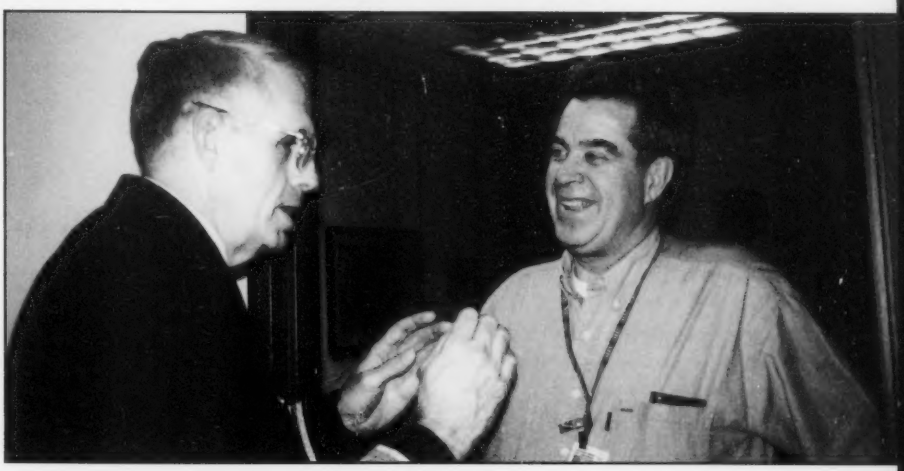
NASH: I agree that it was not a perfect process, few if any processes are...and change is always uncomfortable. Considering other alternatives, we believed that the process mapping method formed a good basis for making organizational decisions. However, we are continuing to refine the process. As we roll this out to our field activities, we will have a much better handle on the process, have better answers to people's questions and make sure that everyone is aware of where we are and where we are headed. It is good that our managers believe in the value of their work and want to protect their people, but I hope that there wasn't any self-interest going on in the process and that if there was that people quickly recognized the need to work toward what was best for our command. The overarching objective was to realign our resources and smartly align ourselves closer to our customers. We tried to consistently offer the most up to date and accurate information to everyone through e-mails, town meetings, and other means to keep everyone fully informed. We also involved as many people in the process that we could. This was a very open forum. For those who want more clarification on how the process worked, all of our employees will continue to have access to those leading the effort.

LANDERS: During any significant reorganization where people are reassigned, in some respects they lose their corporate identify. This can be an emotionally difficult transition. What people strategies did NAVFAC implement to help people work through this process?

NASH: First, I am very pleased that, to date, we have avoided a reduction-in-force that would have been even more difficult. We also did our level best to minimize the transition time. We originally had over 30 people without job assignments and within the first two weeks after our new organization stood up, we got that number down to about 20. We all learned a lot of lessons and have improved the process. We could probably do better at mentoring or career counseling people during the transition period. We also need to make sure that our employees know that we fully appreciate their past contributions and that their reassignments were based on the changing needs of the Navy, not on their ability to do good professional work. Many of our finest employees were moved in order to better serve our customers.

LANDERS: Reorganizations can end up as nothing but a game of musical chairs and when the music resumes, the melody remains the same. What are we going to do to make sure that NAVFAC doesn't end up as just a smaller version of its previous self?

NASH: You are right about most reorganizations ending up as just paper drills. I am committed to making certain that we change the way we conduct business, reassess our



culture and internal behaviors, and change where needed in order to focus on our customers and add dignity and respect to our employees. I want to add to this discussion that NAVFAC is not broken, but we do need to morph or change our culture to meet the future. We need to keep focusing on outcomes, processes, and performance metrics that tell us

"Change unfolds one person at a time and, I believe, is best managed in a community that fully understands and integrates teamwork smartly into the whole customer service equation."
--Rear Admiral David J. Nash

the degree that we have changed, where and how much we have improved. NAVFAC has a long history of success stories and strong contributions to the Navy. Nevertheless, we need to always be aware of changing conditions and not get stale. We need to become a true learning organization and actively seek new ideas, learn from our mistakes, and incorporate lessons learned into our business practices. We also must "Lean Forward" to our customers to better understand and meet their needs. We need to "reframe the question" regarding how we can support them, based on listening to their needs and couple those with our professional core competencies and capabilities. Change unfolds one person at a time and, I believe, is best managed in a community that fully understands and integrates teamwork smartly into the whole customer service equation.

LANDERS: For a corporation the size of NAVFAC, changing an organizational culture typically takes anywhere from six to 10 years. First, do we need to change our culture, and secondly, if we do, how can we accelerate that change?

NASH: As Dr. Stephen Covey says, let me handle this question based on "First things First." Yes, I believe we do need to change our culture and no I don't believe we need to change our culture. How's that for ambiguity? The real answer lies somewhere in between. We have somewhat of a dual, but closely aligned professional civilian/military culture that merges very well into a strong team. As a group of individuals, it is critical that we continually recognize the value of the full range of our diversity whether our differences are cultural, racial, gender-based, left-brain or right-brain driven and all the other things that make us precious and valuable as individuals. Our country is based on the strength of our individualism coupled with our willingness to form partnerships with one another toward common worthy goals. Our strength lies in our teamwork. If there is anything that we need to be vigilant about, it is making sure that we don't close off opportunities to discover new ideas. We need to be open to one another within the corridors of NAVFAC, as well as be open to ideas that can spring from anywhere. We need to balance our creative spirit with our professional skills in order to get the job done. By ensuring this, we can develop innovative solutions and create the best NAVFAC to support our Seabees and other clients. And, we don't need to wait 10 years to do this…with the right mindset or attitude toward learning, coupled with a bias toward action and smart follow up, we can start doing this today.

LANDERS: What are the essential differences in the way NAVFAC was organized and the new organization?

NASH: In the past we have been organized based on functions. Now we are not only reorganized around our products and services, but around our customers.

LANDERS: How do you personally keep informed of the concerns, frustrations, and other issues of NAVFAC employees?

NASH: I constantly seek opportunities to listen to our employees in both formal and informal settings. There's no single answer to this. During the past two years I have consistently held "all hands" meetings. But, I think another avenue is to meet with employees in smaller less formal group settings. People are more willing to be candid and speak up in "town meeting" type sessions. I have asked our leadership to schedule routine "town meetings" within our headquarters offices to make sure our lines of communication are open, unambiguous, and productive.

Customer focus

LANDERS: For the past year or so, you've emphasized the need for all NAVFAC employees to "Lean Forward" to our customers. How do you define the concept and have you any "Lean Forward" stories to tell that shows that we're moving in the right direction?

NASH: Simply stated, "Leaning Forward" means listening to our customers needs and responding with a bias toward exceeding their expectations. As I said earlier, one of our top priorities was to seek short term results, along

with targeting long term improvement strategies. NAVFAC has been very successful in the areas of public works, environmental cleanup and compliance, family housing, and others. Our energy savings initiatives alone will result in $150 million in savings to the Navy by the year 2000. Through partnering with regulators, increasing the use of innovative technologies and improving the way we write scopes of work, our environmental team has avoided about $600 million in projected FY97 cleanup costs. We have also significantly decreased the caretaker costs for our BRAC sites. In all of these areas and more, the NAVFAC team has been making great progress.

LANDERS: One of the top rated quality corporations in the country has "The 1:70 Rule" that says that it only takes one negative customer contact to offset 70 customer good news stories. Much of NAVFAC's business reputation is and will always be based on anecdotes, what can we do to ensure a highly polished reputation?

NASH: Yes, I've read that these customer contacts are sometimes called, "Moments of Truth". We need to recognize these moments and make sure that we delight our customers, exceed their expectations and anticipate their needs in order to be prepared to delight them again and again. Moments of truth can be telephone conversations, briefings, written reports, faxes, meetings...touch points where our customers rely on us for timely products and services of outstanding quality and relayed with professional courtesy. And, when we falter we need to work diligently to fix customer problems in a manner that helps the customer recover quickly. We need to follow-up these situations to figure out what went wrong and work toward eliminating the possibility of future occurrences. As author Peter Senge suggests in his book "The Fifth Discipline", we need to become a learning organization. We also need to implement what we learn.

I want to take this opportunity to make it clear to everyone that the term customer is pretty generic. Most of the time, we're talking about someone from the Fleet, a major claimant, an installation or a Seabee. Yes, we say they're customers, but most importantly...they are shipmates, we're on the same team, we're one Navy family...still, we want to treat them not only as brethren, but as the receivers of our products and services and we must continually look to offer them great service. Our job is to counsel the customer, listen to them, and deliver "as promised". By embracing and smartly applying the private sector's quality service concepts and methods coupled with our shared Navy experience, we can do this and make Navy life better.

Recently, we pulled together a diverse team of innovative thinkers to develop a quality customer service strategy. This new Innovation Team has been trained and is looking to private industry and customer research groups for ideas, proven strategies and customer service training opportunities that fit NAVFAC's needs. And trust me, they're getting "out of the box" on this one and working on an accelerated schedule to help move us smartly in the right direction.

Specific programs/initiatives

LANDERS: Most people believe that our Construction Battalion Centers at Port Hueneme, Calif., and Gulfport, Miss., are now under the operational control of the two Fleets. What have we lost and what have we gained?

NASH: What we have lost or gained shouldn't be the fundamental points. I believe the point should be how well we will jointly support our Seabees. The Fleets will have operational control of the Construction Battalion Centers and NAVFAC will continue its Seabee mission support. This should offer the Navy a more efficient and effective operation overall. The Seabees will still be able to rely on the logistics support we have provided since they were established during the Second World War. I personally feel that our two Construction Battalion Centers are two of the Navy's best run bases. We are very proud of our Centers and our past work and look forward to meeting their future needs.

NAVFAC has a fine history of supporting the Seabees out of our CBCs and other support activities. Back in the 1940's there were over 300 Seabee battalions and our past colleagues at the Centers were dedicated and committed to winning World War II. Today, we are fortunate to be at peace. There are only eight active Seabee battalions, and I see this smaller force structure as a testimony and compliment to all of the men and women who have served the Armed Forces. We are now in a period of adjustment, where we are called upon to downsize, to consolidate, to become more efficient with fewer resources. I joined the Navy to serve my country, not for personal gain, and I believe that we must all tighten our belts and do what's best for the Seabees. We will continue to work with the Fleet's in any capacity we can to better support the men and women who put their lives on the line every day.

LANDERS: The management and ownership of the Navy's Public Works Centers seem to be confusing to many people. Would you, please, explain where NAVFAC fits in to the PWC picture?

NASH: NAVFAC is the major claimant of the Navy's Public Works Centers, but they are owned by and under the operational control of CINCLANT, CINCPAC, CNET, and CNO. We have about 11,000 PWC employees on NAVFAC rolls and we help the owners in budgeting, financial management and technical support matters. Within the last few years, we have worked very hard to improve the business aspects of the Centers, drive down a fairly significant backlog of PWC work, and to satisfy our customers.

LANDERS: Given the new emphasis on regionalization and consolidation, what do you expect their impact to be on the NAVFAC organization and mission?

NASH: In general, I think consolidation will be good for the Navy. We should be able to be as efficient and effective as we are now or better if we smartly apply best business practices with innovative technologies. Regionalization should follow the same logic. With respect to NAVFAC, we will need to know when, where and how to "flange in" to Navy mission needs where we can bring our engineering, acquisition and other talents to bear and add to the Navy's success stories. We will probably see some impact on the NAVFAC organization, but I don't expect any significant impact on our Navy mission.

LANDERS: Within the last year, some of our activities have been co-locating customer account executives with customers. How did this concept evolve and is it successful?

NASH: Private industry has been effectively practicing this co-location concept for about 10 years in their facilities management operations and have smartly centralized engineering expertise and decentralized execution. This has improved their bottom line effectiveness and added to the quality of their product and service lines. This has been a West Coast NAVFAC pilot initiative aimed at getting closer to our customers and we are working to integrate their lessons learned into the way we do business worldwide.

LANDERS: How do we develop more innovative approaches to matching our products and services to our customers' needs?

NASH: We start by listening to our customers and encouraging them to tell us about their desired outcomes and their expectations. We need to marry up their needs with new ideas, innovative ways of doing business, as well as continuing to maintain and improve upon our professional proficiencies. All of this needs to be done in a manner that targets building strong partnerships with our customers, suppliers, and other key stakeholders.

The future

LANDERS: Earlier you quoted Stephen Covey's "First Things First" concept. He also says, "Begin with the End in Mind." How do you envision NAVFAC after all of the reorganization efforts, changes in behavior and everything else that's wrapped up in the NAVFAC Strategic Plan are said and done?

NASH: Strategic Plans should be living documents that are never truly completed, but always changing to new market conditions and changes in technologies. Change is constant. We need to continue to be vigilant and agile. I'd like to see our organization in full alignment, where recruitment, training, management, and complementary workload are all coordinated, running parallel along the same customer driven path. I would like to see us constantly searching for more innovative approaches to getting our work done. Within house, I think it is important to have employees excited about their work and eager to learn better ways of doing business.

LANDERS: You've dedicated the past few years to changing NAVFAC, from Skunkworks to the most recent reorganization initiative. What can you do to make certain that the road we are on will continue when a new and possibly much different Chief arrives on board? Is there a transition plan that will keep things moving forward or will we begin again with a new vision?

NASH: I think we can expect some changes. Everyone has their own unique or personal way of doing business and moving initiatives forward. But, I am also confident that we must stay the course that we have chosen. There really isn't any other viable option. We must form lasting relationships with our customers and the only way to do this, and I know I'm repeating myself here but it bears repeating, is to improve our communication skills, be willing to adapt to changing conditions, and be consistently reliable partners.

LANDERS: One of the best ways to meet the challenges of the future is to be aware of the past. What can NAVFAC employees do to retain those past lessons learned of days gone by?

NASH: We have a strong heritage of always rising to the occasion. In one form or another, NAVFAC has been around since 1842. We were the first of the Navy's five bureaus. We built and have maintained the Navy's massive shore infrastructure during war and peacetime. We should all be proud to be associated with NAVFAC's history…of our past accomplishments. Many don't realize that those include the construction of the Arizona Memorial, the hangar for Air Force One, along with the enormous construction needs in the Pacific during World War II. They were all built through teamwork, along with the dedication to duty and loyalty to our country. When we harness our professional and technical expertises to these other strengths, we always exceed the challenges of the era. We need to study our history, document our lessons learned and act upon them by incorporating them in the way we do future business. We need to communicate our history better and I'll work on that. It is also important to read outside the areas of our expertise in order to integrate new or different concepts that can help us form new ideas.

LANDERS: Your Navy career has spanned three decades. What has changed and what has remained the same?

NASH: What has not changed is the impressive dedication of our civilian/military team. A major shift in emphasis toward people issues or quality of life issues is a very significant and positive change in the way we contribute to the needs of our employees and the Seabees. The Navy has improved family housing, built day care centers, and taken on added responsibility in other areas to take care of people. We also seem to be placing more critical emphasis on work factors that can improve our business efficiencies and overall effectiveness. We have our Civil Engineer Corps Officers School to help train employees, we are providing top notch computers and many of us have Internet access. During the past few years, we have improved employee or team recognition programs. We can all help improve NAVFAC in our own unique ways or together in team settings.

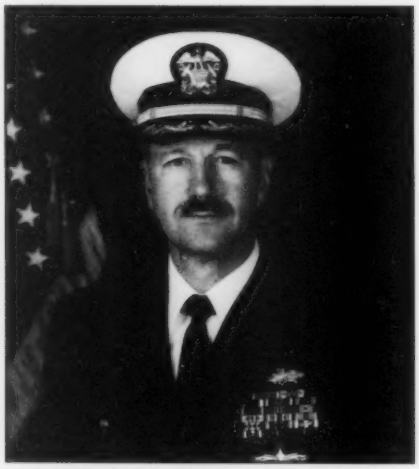
We should all work toward the day when we can look back on our careers and be proud that we left the Navy a better place than when we arrived. That's our job and a signature of our personal success and contribution to a worthy cause.

LANDERS: And lastly, what advice do you have for our latest crop of new employees, CEC junior officers and "Fighting Seabees"?

NASH: I believe that truly successful people dedicate their lives to serving others. Their lives form masterpieces for all of us to aspire toward. It is important that we hold dear our personal and professional principles, values and ethics. I also think it's good advice to make learning a lifelong experience. And last, take care of yourselves and your loved ones.

Two Civil Engineer Corps officers selected for rear admiral

Rear Admiral (Sels) Michael R. Johnson, CEC, USN, and Charles R. Kubic, CEC, USN, have been selected for promotion to rear admiral (lower half).



RADM (Sel) Michael R. Johnson, CEC, USN

RADM (Sel) Charles R. Kubic, CEC, USN

RADM (Sel) Johnson recently reported to Commander-in-Chief, Atlantic Fleet, as the director of shore activities readiness (N46).

Prior to his current assignment, from 1995 to 1997, Johnson was Commander, Southwest Division, NAVFAC, in San Diego, Calif.

From 1992 to 1995, he served as deputy director, Facilities and Engineering Division (N44), for the Deputy Chief of Naval Operations (Logistics) OPNAV.

Johnson received his bachelor's degree in civil engineering from the University of Colorado, Boulder, and was commissioned an ensign through the Naval Reserve Officer Training Corps Program in 1970. He transferred to the Civil Engineer Corps in 1972.

His personal awards include the Legion of Merit with one Gold Star, Meritorious Service Medal with four Gold Stars, Navy Commendation Medal, Army Commendation Medal, and Navy Achievement Medal.

RADM (Sel) Kubic assumed responsibilities as commander of the Twenty-second Naval Construction Regiment and vice commander of the Second Naval Construction Brigade in June 1997.

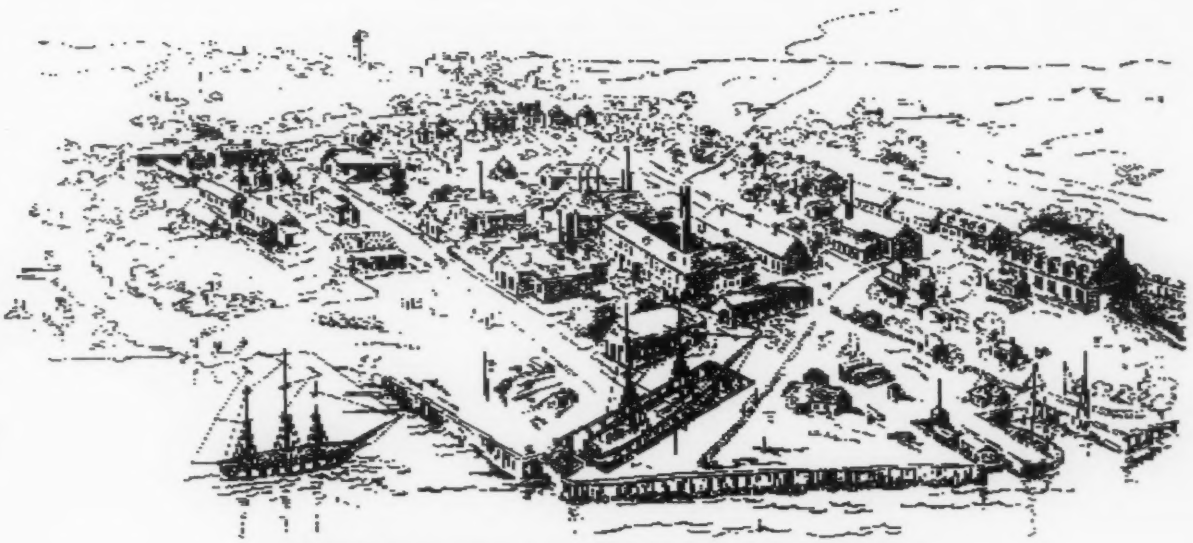
A graduate of Lehigh University in Bethlehem, Pa., Kubic received his commission in the Civil Engineer Corps in 1972 through the Reserve Officer Candidate Program.

Kubic's most recent tours of duty include Vice Commander, Atlantic Division, NAVFAC, in Norfolk, Va., from 1994 to 1997 and production officer for Public Works Center Norfolk, Va., from 1991 to 1994.

His awards include the Legion of Merit, Defense Meritorious Service Medal, Meritorious Service Medal, Navy Commendation Medal, and Navy Achievement Medal.

NAVFAC's future home: WNY Building 33 -An evolution of the Navy's needs

By Tony Diagonale



1887 aerial view of Washington Navy Yard

The renovation of 140-year-old industrial buildings in the Washington Navy Yard (WNY), Washington, D.C., into a state-of-the-art office complex combines modern design and contracting techniques with the Yard's century-old history of adaptive reuse of buildings.

Naval Facilities Engineering Command, Engineering Field Activity Chesapeake (EFA CHES), Washington, D.C., is renovating Building 33 and three smaller buildings into a headquarters complex for NAVFAC and the Navy Office of the Judge Advocate General (JAG).

Building 33 is an "L" shaped building that forms the south and west legs of a larger complex called the Quadrangle, which at one point in the last century was the heart of the "Modernization of the Navy's Ordnance Center."

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WNY is the first shore facility established by the United States of America for the building of naval war ships. Authorized in 1799 by our founding father, George Washington, WNY became a center for innovation. The world's first marine railroad was constructed in the Yard in 1822, allowing ships to be hauled out of the water for hull maintenance. WNY expanded its role into ordnance manufacturing and advanced research and experimentation once the Mexican War demonstrated the inadequacy of the ordnance production system in the United States.

Lieutenant John Dalghren took command of WNY in 1847, and presided over its expansion as an ordnance laboratory. Under Dalghren's tenure, the first scientific ordnance testing methodology was developed. These advances spearheaded the Yard's growth during the 1850s.

History of the Building 33 complex

The Yard's former timber docks were filled in to create a new land area where Building 33 would be constructed. Large timber piles for Building 33's granite foundation walls were driven into the new fill in 1853. In that year, the Yard's Chief Engineer, W.P.S. Sanger, described the planned construction:

> These [two projects entitled Extension of Boiler Shop and Conversion of Old Ordnance to Machine Shop] originally formed two separate objects of improvement, but since the 1st appropriation, the plan has been modified and it has been determined to enlarge the Machinists Department to such an extent as to furnish ample facilities for the construction and repair of Marine engines, and any other machinery which may be required for the Service. The arrangement decided upon is to construct an establishment enclosing an area in the center, and having two faces of 432 feet each and two faces 265 feet each, one fourth of the lower floor to be appropriated for a Smithery; a portion for a Boiler Shop, two large apartments for heavy tools, and one for a fitting up shop, the light tools and pattern shop to be in the second story.[1]

Construction of the brick Quadrangle complex (currently Buildings 33 and 36) began on March 26, 1855. By June 30, 1855, the walls of Building 33 were nearly complete: the one-story northern half of the building was complete and the two-story southern half of the building was nearing completion. Also, half of the girders and floor joists were in place and the wooden flooring was dressed and ready for placement. All of the doors and windows were complete, and the roof was finished. In his 1855 annual report, Sanger reported 1,116,650 bricks had been used in construction.[2]

Though occupation of Building 33 began in 1857, the building was not completed until 1858.[3] A total of $145,000 was expended to construct the building.[4] When completed, Building 33 housed the Machine Shop and Smithery for the Steam Engineering Department.[5]

Between 1853 and 1859, Building 109 was constructed in the center of the Quadrangle. It was used as the main Boiler House. Between 1887 and 1889, Building 39 was built abutting the north of Building 109 for an electric powerhouse; and Building 37 was built as an addition to the west of the Boiler House during the years between 1890 and 1895.

Between 1890 and 1895, Building 33 was renovated and designated the West Gun Carriage Shop. Industrial traveling cranes were also installed. The function of this

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[1] *National Archives. Records of the United States Navy. Bureau of Yards and Docks. Records of the Chief of the Bureau, 1820-1946. Entry 56, "Annual Reports of Expenditures and Estimates 1836-37, 1842-1911." 1853-1854, Washington Navy Yard.*

[2] *National Archives. Record of the United States Navy. Bureau of Yards and Docks. Record of the Chief of the Bureau, 1820-1946. Entry 56, "Annual Reports of Expenditures and Estimates 1836-37, 1842-1911." 1853-1854, Washington Navy Yard.*

[3] *Henry B. Hibben, History of Washington Navy Yard, 203.*

[4] *National Archives. Records of the United States Navy. Bureau of Yards and Docks. Records of the Chief of the Bureau, 1820-1946. Entry 69, "Construction Ledgers, 1832-1872." Volume 7: Washington, D C Navy Yard.*

[5] *National Archives. Records of the United States Navy. Bureau of Yards and Docks. Records of the Chief of the Bureau, 1820-1946. Entry 56, "Annual Reports of Expenditures and Estimates 1836-37, 1842-1911." 1858-1859, Washington Navy Yard.*

[6] *E. R. Vandegrift and I. Bassett, General History and Description Book of the United States Navy Yard at Washington, 28-35.*

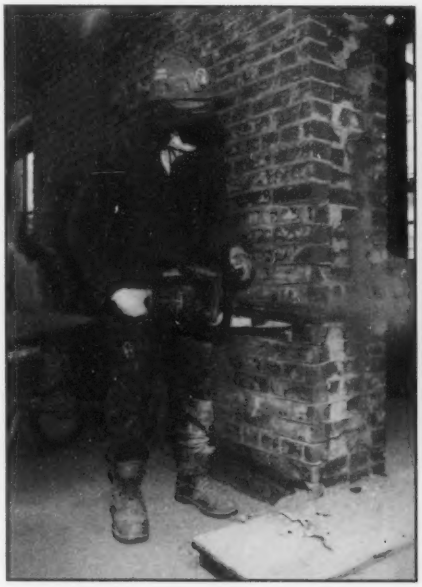
shop was described in a 1906 history of the Navy Yard:

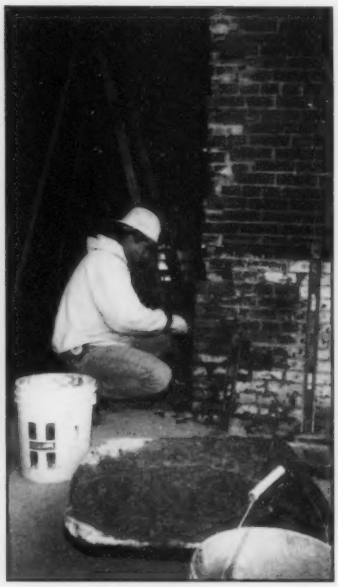
> West of the Gun Shop is the East and West Gun Carriage Shop, the principal machinery in these shops consists of planers, boring mills, slotting machines, drill presses, turning lathes, etc., for the manufacture of gun mounts and accessories, ammunition hoists, etc.[6] For naval guns there are two classes of mounts, namely, pedestal mounts for guns seven inches and smaller and turret mounts for guns of larger sizes.

Role of the Yard changes

Though numerical and designation changes occurred during the pursuing years, the function housed in Building 33 remained the same. This was not necessarily the case with the Navy Yard as a whole. During World Wars I and II, because of the large demand for ordnance production, the Navy began to contract more and more manufacturing to the private sector. The role of the Yard turned toward testing the equipment produced by private firms and developing new equipment.

After World War II, the emphasis slowly switched from production to administration. And finally, in 1958, WNY was ordered to phase out all industrial operation by Jan. 1, 1962. The western portion of the Navy Yard was transferred to the General Services Administration in 1963. Shortly thereafter, the eastern portion of the Yard was placed on the National Register as an Historic District. Building 33 was stripped of its machinery and equipment, and the huge cavern became a storage depot.





Left: A mason cuts through mortar, allowing bricks to be removed. This process, called "toothing the opening" allows reuse of the original brick to make a doorway. Right: A mason lays reclaimed brick in doorway. (Photos by Ken White)

Adaptive reuse of buildings

Since 1965, the Navy has maintained a policy of developing WNY into an administrative and public interpretation center; not only are naval administration offices located within the Yard, but public museums detailing the history of the Department of Navy as well.

The late 1960s and 70s saw the beginning of smaller buildings being adaptively converted into office spaces. Most of these buildings already had structural floors in them that were suitable for gutting and converting into modern office spaces.

In 1983, then Engineering Field Division Chesapeake was given the opportunity to take an historical high-bay manufacturing building (Building 111) and convert it to a first-class administrative office space.

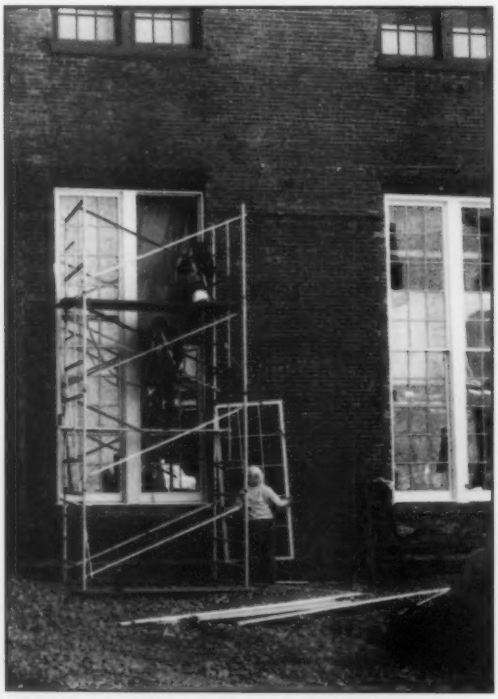
Building 111 tested the theory that a 19th century manufacturing building could be successfully converted to state-of-the-art office spaces that complied with all the requirements of the State Historic Preservation Office, the Commission of Fine Arts, the National Capitol Planning Commission and Navy building criteria and national building codes. The test was a success. Building 111 currently houses the Naval Criminal Investigative Service and JAG in a five-story "building within a building."

Construction in Building 36, the east and north legs of the Quadrangle, began in 1988. It set the prologue for the complete adaptive reuse of the "Quad." Four new floors of office space were constructed in the building. The lobby of this building preserves a slice of history by maintaining the high bay, rustic brick walls and steel pratt trusses of the roof above. What was once a large arched opening in the south facade for railroad cars to haul gun mounts away has been glassed in to provide natural light to an open lobby that accommodates a small café.

Building 33 renovations and innovations

The Base Closure and Realignment Commission of 1993 (BRAC 93) breathed new life and construction into the Navy Yard. The BRAC construction program includes renovating the second half of the Quadrangle, Building 33, and the three smaller buildings. The Building 33 renovation design calls for a total of 156,000 square feet of office space to be created by inserting four new floors within Building 33, three new floors in Building 109, and two floors in Buildings 37 and 39. The new floors, which have already been constructed, stand independently within the restored and insulated walls and roof of the older buildings.

Original wood windows are being restored, old 19th century glazing is being reused. A new slate roof will



Workers install windows in Building 33.

incorporate skylights so that natural light can penetrate the buildings' interiors. The center buildings are now connected to Building 33 by a three-story glass and brick link, which will also serve as a small lunch area. The exterior courtyard of the Quadrangle will have raised planter beds with seating and will be landscaped to create a park-like setting. The result will be a true metamorphosis of a massive brick masonry industrial building into a historically restored shell housing a new high tech office environment.

But the story doesn't end there. Because of a tight schedule and a BRAC law requiring building occupancy by 1999, daring innovation had to be used once more. The senior management of EFA CHES decided to take a calculated risk and make Building 33 a design/build/bridging project. The design firm of Ewing Cole Cherry Brott developed the architectural drawings to a 50 percent level, with the mechanical, electrical, civil and structural drawings to between a 25 and 35 percent level. This extent of design was necessary because of all the outside agencies that needed to review and approve the designs of the historical adaptive reuse. Further, a source selection request for proposal (RFP) procurement process was chosen to complete the acquisition of a construction contract in a timely manner.

But, before the completion of the design, innovation and technology were to be reborn in Building 33. NAVFAC wanted its future home to be the first model of "greening" undertaken by the Navy on a large scale. The RFP documents were revised to include the concepts of greening: energy conservation, quality of life and minimal adverse impact on the environment. The construction contractors were asked to participate by offering greening technology in their proposals. With the selection of the construction firm, The Sherman R. Smoot Corporation, and their designers, Shalome Barranes Associates, the partnering team was ready to begin the final recreation of Building 33 into a 21st century, state-of-the-art office complex.

Once finished, Buillding 33 will be a showcase of open-office design, energy conservation, cable management (voice/data), in-door air quality, interior lighting levels and safety/health concerns.

Tony Diagonale is the architectural branch manager in the design division at Naval Facilities Engineering Command, Engineering Field Activity Chesapeake, Washington, D.C.

"Greening" features of Building 33

The three basic principles of "greening" are to conserve energy, to minimize adverse impact on the environment resulting from construction activity or from future operations, and to enhance the quality of life and productivity of the occupants in the building.

Through a combination of efforts by EFA CHES and its architects, the construction contractor, and its design team, many concepts were reviewed, evaluated and accepted for incorporation into the final design that will become the innovative "green" Building 33 of the next century.

To conserve energy and reduce the cooling load of the building, the building envelope was evaluated and insulation was increased. Triple glazing will be used with low "E" glass and in some cases, non-reflective heat mirrored glass will reduce heat transmission. The ambient lighting level in open offices will be reduced from 50- to 30-foot candles. While consistent with Illuminating Engineering Society Standard RP-1, the use of indirect/direct pendant light fixtures will create a more pleasant, glare-free work environment; and task lighting will augment light levels where required. This further enhances the working environment by providing a better quality of lighting. The principal of greening is achieved by reducing energy consumption through the use of reduced chiller tonnage and the use of high-efficiency, variable speed motors on all equipment.

Other green concepts will include the use of recycled materials throughout the building and materials that have low volatile organic compounds, such as carpeting made of recycled fiber and installed with no glues that cause outgasing. Outside air ventilation, which allows fresh air to circulate inside, exceeds industry standards and will be based on user comfort and not just building loads. The air will be 85 percent filtered to remove as many contaminants as possible. In addition, prior to occupancy, the contractor will take a few days to purge the air in the new buildings with fresh outside air. Natural daylighting will be increased throughout the building via skylights, and occupancy sensors will shut off the lights in unoccupied offices. Automatically controlled dimmers will also reduce the lighting levels on bright sunny days and increase lighting levels on gray days through the use of photo electric cells. To conserve water, low water consuming fixtures will be installed in toilets.

To further increase the performance of Building 33 and its operation, the entire building will contain a six-inch raised floor to facilitate power, telecommunications and data distribution, allowing easy access when running cables or moving electronic equipment. The flooring will be the latest in technology, a concrete filled metal decking system covered in carpeting. The concrete provides sound deadening between floors. To further the greening idea, demolished material such as concrete slabs and steel will be sent to recycling plants.

Finally, the public works center at the Navy Yard will be provided with metering devices to measure energy consumption on all major utilities for both the new green Building 33 and its not so green twin, Building 36. The hope is clearly to demonstrate that greening really works.

A directional sign to assist visitors in locating the museum was painted by Seabees who volunteered their off-duty time to complete this project.

CEC/Seabee Museum prepares for the 21st Century

By Sharon L. Luckett

The Seabees are legendary for their extraordinary efforts and contributions to the Navy, the nation and the world, both in wartime and in peace. They have built and fought for the Navy since the early days of World War II. They were the first naval units in U.S. history specifically organized to perform construction overseas in combat areas. Although their motto is simple, "We build, We fight," their list of achievements is inspiring. In wartime, Seabees built entire bases, airfields, roads, bridges, dock facilities, fuel depots, key supply installations, hospitals and other facilities needed to support American combat forces. Seabees sometimes found themselves in direct contact with the enemy troops. During peacetime eras, new roles for the Seabees developed. They became the "Navy's Goodwill Ambassadors," aiding thousands with their rescue, recovery and rebuilding efforts.

In the late 1950s, Seabee civic action teams were developed. These small detachments provide military aid action and construction work and training to underdeveloped countries. They construct schools, orphanages, roads and public utilities in remote parts of the world and pass on their skills to the local residents, providing residents with the skill and confidence needed to boost their lives. Civic action team programs arrange health programs, dental care and similar village improvement projects for war-torn lands. Seabees serve wherever our nation's interests lie, all around the globe.

To commemorate and preserve the legendary accomplishments of the Seabees during World War II, officials opened the Civil Engineer Corps (CEC)/Seabee Museum in Port Hueneme, Calif., on July 4, 1947. Receiving 30,000 visitors each year, it is the Navy's official construction battalion museum and serves a worthy cause. Its vast collection of artifacts and materials vividly portrays the many accomplishments of the Seabees and the Corps through the years.

Since 1947, the Seabee Museum has relocated and expanded. Three major areas were developed in the museum. The core of the facility, two large quonset huts, depicts Seabees from World War II through the present. The Ben Moreell Wing, named in honor of the father of Seabees, Admiral Ben Moreell, centers on the CEC and the Bureau of Yards and Docks. It starts with the 19th Century and continues through the modern era. The Cultural Wing presents the places where Seabees and CEC officers have served throughout the years.

To bring the museum into the 21st Century and to ensure the long-term preservation of its splendid collections, the museum buildings and exhibits will require some changes over the next few years. The CEC/Seabee

Historical Foundation, a non-profit organization created to support the museum and effect other initiatives to preserve and publicize the history and legacy of the Seabees and the CEC, is planning a building renovation/capital improvement project under the leadership of the foundation's president, Rear Admiral Arthur W. Fort, a retired CEC officer. Under the provisions of SECNAVINST 5755.1A, Naval Facilities Engineering Command (NAVFAC) will be the construction agent for any approved capital improvement projects. NAVFAC will also ensure preservation of the exhibits.

A number of changes have already been accomplished at the museum, including a revitalized gallery focusing on the Seabees' history from World War II through Vietnam. A new mini-theater in the gallery shows a video presentation which traces the Seabees from the 1940s to the 1990s. More interactive and media presentations will be incorporated into the mini-theater, including CD-ROM and Internet access, live educational programs and lectures by Seabee and CEC veterans, researchers and historians. In addition, a food service area is planned to accommodate weddings, receptions and other special events.

Your support of the CEC/Seabee Museum is encouraged to help preserve the history of the Seabees. For more information, call John Langellier, museum director, at 805-982-5169, or Captain William Hilderbrand (Ret.), executive vice president of the CEC/Seabee Historical Foundation, at 228-865-0480, 228-871-2394, or DSN 868-2394.

Sharon L. Luckett works in the Public Affairs Office at Naval Facilities Engineering Command Headquarters, Alexandria, Va., and is editor of the Navy Civil Engineer magazine.

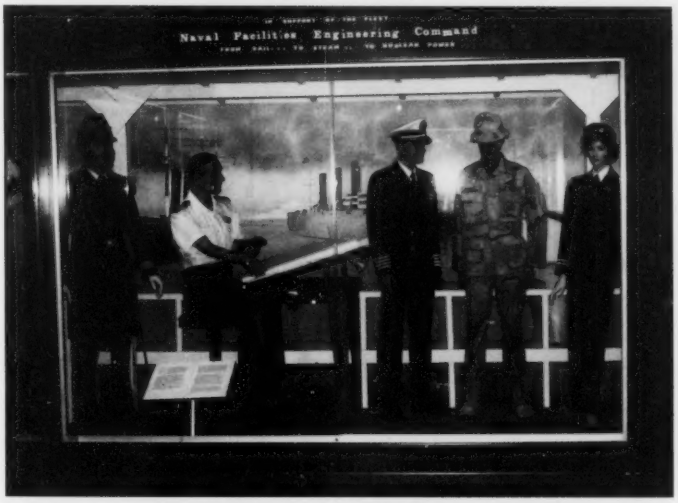
Gulfport Seabee Museum

The Gulfport Branch of the CEC/Seabee Museum opened at Naval Construction Battalion Center Gulfport, Miss., on March 6, 1995. Seabees and friends of Seabees from all over the country attended the dedication and ribbon cutting ceremonies.

With the help of the CEC/Seabee Historical Foundation members and supporters, private funds were raised to renovate and expand a World War II battalion administration building at the Seabee Center for use as a museum.

The museum honors the Seabee and CEC heritage, shows the evolution of the Gulfport Seabee Center, and reflects the Seabees' contributions to the nation and the world.

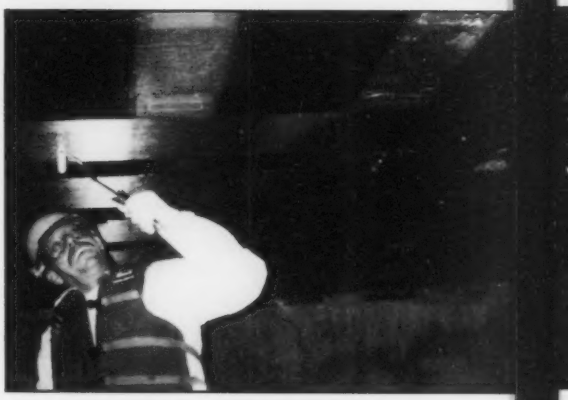
The Ben Moreell Wing focuses on the Bureau of Yards and Docks and the Civil Engineer Corps. (Photo by JOC William Mooney)



Museum display depicts the Civil Engineer Corps from sail, to steam, to nuclear power.

Fiber reinforced polymer composites upgrade Navy pier

By Dr. George E. Warren, PhD, P.E.



The Naval Facilities Engineering Service Center (NFESC), Port Hueneme, Calif., is using fiber reinforced polymer (FRP) composites to increase the strength of existing Navy piers. By using FRP reinforcement, many piers won't have to be rebuilt or replaced, and can often remain in service as upgrades are applied. With the Navy's extensive and costly backlog of pier repairs, shore facility managers had to develop another way to extend the useful life of existing pier assets. An earlier NFESC research project proved the effectiveness of applying external fortification to reinforced concrete slabs and beams. With the assistance of the Public Works Center (PWC) and the staff civil engineer at Naval Station (NAVSTA) Norfolk, Pier 11 at NAVSTA Norfolk was chosen for the next step—to demonstrate a working pier deck upgrade and health monitoring instrumentation. The work was done in November 1996.

Pier 11 is a reinforced concrete structure 1,400 feet long and 150 feet wide. The 14-year-old pier serves nuclear carriers of the U.S. Atlantic Fleet. A critical asset, it is heavily trafficked by large trucks and other vehicles that are used to provide dockside maintenance on the carriers. The heaviest vehicles are truck-mounted portable cranes which operate while supported by four outrigger floats. Portable crane operations are generally limited to 25-foot lanes adjacent to the curbs.

When built, the pier was rated for 70-ton truck-mounted cranes. However, operators discovered that five longer deck spans of the pier had design shortfalls that limited 70-ton crane service to less than optimal capacity, hobbling fleet operations. To address the shortfall, one of the five spans, located between pile bents 50 and 51, was chosen for the upgrade demonstration.

NFESC engineers designed a carbon graphite composite laminate upgrade to increase the deck strength by 10 percent. While our engineers have demonstrated strength increases of more than 40 percent in similar applications, such a dramatic increase was not needed in this case. The upgrade was designed to allow unlimited 70-ton and limited 90-ton service. There was no evidence of deterioration except some hairline cracking and minor efflorescence. Two upgrade areas of 19 feet, 2 inches by 15 feet, 11 inches were located adjacent to the curbs and outboard of the utility trenches. The upgrade consisted of adding external, biaxial reinforcing on the underside of the deck. The piles did not require upgrading. There were no damage or corrosion mitigation requirements for the concrete or reinforcing steel.

The form marks and surface discontinuities were knocked down by removing concrete with a small, compressed air-driven hammer. The concrete surface was ground smooth and cleaned by sand blasting. Workers then applied an epoxy primer to the concrete and allowed it to cure. The composite consisted of uniaxial carbon graphite fiber sheets and epoxy resin matrix (saturant). The laminate was

Left: Carrier Pier 11, located at NAVSTA Norfolk, was chosen to demonstrate a working pier deck upgrade. The USS Stennis (CVN-74) is pictured in the background. Bottom left: Worker installs graphite laminate reinforcing grid on the underside of the pier deck.

Load impact tests were conducted on Pier 11, with a Falling Weight Deflectometer (in foreground), before and after the upgrade.

hand laid and cured without the aid of external heating or vacuum bags. Since the upgrade involved two separate areas, we used two different systems and their associated installers for the demonstration. The carbon fiber sheets of each system are very similar.

The installer on the south side of the pier covered the entire surface with three layers of graphite sheet, two layers were aligned longitudinally and one layer was aligned transversely. Workers applied epoxy saturant by hand roller to the carbon fiber sheet prior to placement. They applied successive sheets by rolling epoxy on the sheet as well as to the previous layer. Excess saturant and bubbles were brushed, squeegeed, rolled and otherwise "worked out by hand" from each layer. Workers cut out areas around pipe hangers and drains, and lapped sheets near the midspan. They rolled an outside layer of saturant over the entire area. The finished laminate covered the entire area under the crane operating lane.

The installation process on the north side was similar. Installers laid the graphite strips with approximately six inches between them. Spaces between the strips allow water that leaks through the deck to pass. The reinforcement layout resembled a grid. The number of sheet layers in each direction varied between one and five. Installers adjusted the strip spacing to miss the drain hole and pipe hangers. They applied epoxy saturant only to the surface overhead and worked the saturant through the fiber layers with hand rollers.

Our engineers conducted impact load tests before and after the upgrade. Before the upgrade, tests showed the selected sections were less stiff than all neighboring spans. Two post-upgrade tests indicated that the composite laminate was acting integrally with the reinforced concrete. These measurements indicated that stresses in the laminate and the steel reinforcing bars would be well within allowable limits.

We installed strain and damage sensors and piezoelectric patches on the laminate to monitor the long term performance of the upgrade. The sensors measure maximum response to loads and will detect damage along the edges. The Center for Intelligent Material Systems and Structures (CIMSS) at Virginia Polytechnic Institute and State University, Blacksburg, Va., developed the piezoelectric patches. The patches will provide real-time structural health monitoring by sensing initiation of edge delaminations and structural damage in the laminate. All work was completed while Pier 11 continued in service.

External composite reinforcement can be an attractive upgrade alternative to demolition and reconstruction. In cases such as this where the reinforcement is added to the underside of the deck, the pier can remain in service during installation. Graphite composite laminating materials cost about $150 a pound or $82 a square yard, but the installation time is fast and labor costs are expected to be less than $55 a square yard. We anticipate the life of a graphite composite should be longer than traditional pier construction materials. For existing piers with sufficient deck thickness, strength upgrades of more than 40 percent can be realized with external composite reinforcing.

Additional demonstration projects are underway and forthcoming. In October 1997, a demonstration project started at Naval Station San Diego, Calif., and another project is planned for the Pearl Harbor Naval Complex beginning in 1998.

Naval activities with piers in need of repair or replacement are encouraged to contact NFESC, Port Hueneme, Calif., to discuss the possibility of using FRP reinforcement.

Dr. George E. Warren, PhD, P.E. is a research structural engineer for Naval Facilities Engineering Service Center, Port Hueneme, Calif.

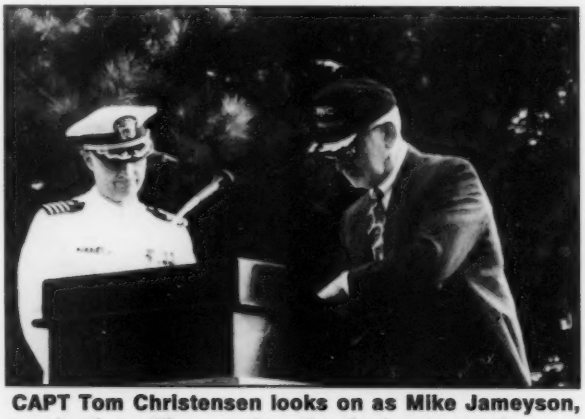
Farewell to PWC San Francisco

By N. Scott Sutherland

(Left to right) Master Chief Nygard, YN1 Ogden, EOCS Browning and EOC Parrington, lower PWC San Francisco's colors one last time. The three chiefs were hand picked volunteers to assist in the closing of PWC. (Photos by CDR Chuck Doherty)

On a fog shrouded morning, the U.S. Navy bid farewell to one of its own as the command flag of Navy Public Works Center (PWC) San Francisco, Calif., was lowered one final time while a lone bugler played Taps, signaling the end of the naval activity at the tender age of 23.

When the Cold War ended with the symbolic dismantling of the Berlin Wall in the late 1980s, little did the men and women who repaired broken piers and ruptured water pipes for the Navy throughout the San Francisco Bay area realize that they, too, would soon feel the impact of that significant U. S. victory.



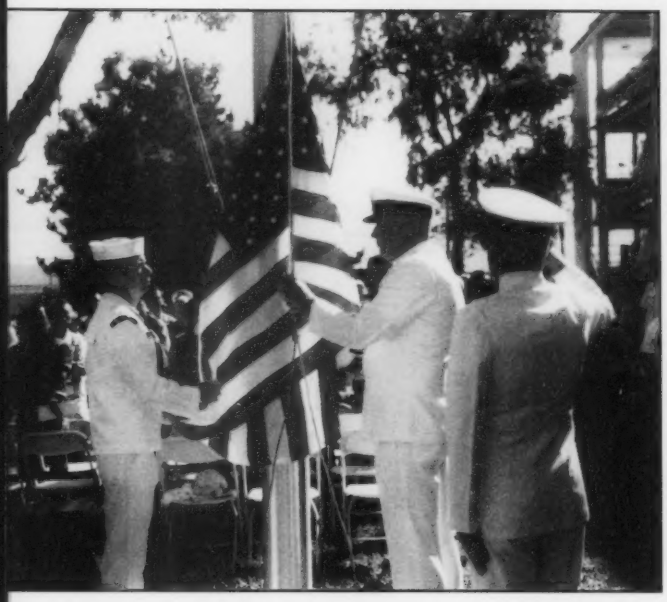
CAPT Tom Christensen looks on as Mike Jameyson, production officer, makes the final entry to the PWC San Francisco log books, "Operations have ceased."

"It is a bittersweet victory for us today as we close this chapter in naval history," said Captain Thomas H. Christensen, the eleventh and final commanding officer for PWC San Francisco. "With the professionalism and class that are our trademarks, this center maintained the care of its people, their customers and the taxpayers. The mission is complete."

PWC San Francisco was indeed the ninth such public works facility to form under the direction of the Chief of Naval Operations in June of 1974. Work sites and support offices surrounded the bay area and included places like Treasure Island, Alameda, Mare Island, Oakland, San Bruno, Stockton, Moffett Field, Concord and Novato. The center started with a little more than 1,100 employees and about a dozen Civil Engineer Corps (CEC) officers and grew to reach nearly 2,000 members by the early 1990s.

Virtually half the manpower of the command could be found in the maintenance department. Emergency and routine services such as heating and air-conditioning problems, painting and locksmithing; recurring maintenance and specific repair and construction work throughout the bay area, particularly in the Navy family housing complexes, contributed to the center's nearly $300 million annual business in San Francisco. Encompassing virtually the infrastructure of a medium-sized city, the center provided utilities, engineering, transportation, environmental, housing and construction services to the entire naval community in the San Francisco Bay area.

PWC San Francisco also responded with needed aid outside their gates when various typhoons on Guam and severe winter storms tore apart utility systems and roadways in the bay area. Who will ever forget the Loma Prieta Earthquake in 1989 when an upper section of Interstate 880 collapsed



onto the lower section, crushing and trapping the rush hour commuters heading home? It was PWC San Francisco's crane and rigging division who were among the first rescue vehicles to reach the collapsed roadway. Their generators supplied power to the many bases that lost local utility power; and their officers and employees, doing what they did best, provided service to those in need. That time has ended.

Rear Admiral David J. Nash, Commander, Naval Facilities Engineering Command and Chief of Civil Engineers, called this the beginning of a new era rather than an end to a Navy activity.

As if to punctuate that thought, the guest speaker, Mr. Sandre' Swanson, chief of staff and district director for California Congressman Ronald V. Dellums, called the disestablishment of PWC San Francisco a new beginning.

"This is a fresh start," Swanson said, "a new beginning and the Navy is helping. We have the funding available to assist in the creation of new jobs and industries in this area, including the funds to clean and restore the environment. We're already succeeding in Alameda by helping former Navy civilians start and develop their own businesses."

As often happens in times of great change, purpose is often lost in the shuffle of daily activities, not so with the men and women of PWC San Francisco.

According to Christensen, although the center was identified for closure under BRAC, PWC San Francisco is believed to be the only military activity to earn a Meritorious Unit Commendation after the announcement for closure was made. He added that when PWC San Francisco closed its doors, there was still cash on the books.

Eight former commanding officers attended the center's closing ceremony, including Rear Admiral David E. Bottorff, CEC, USN (Ret.), former Commander, Naval Facilities Engineering Command (NAVFAC); Rear Admiral Thomas A. Dames, CEC, USN, (Ret.), former Commander, NAVFAC, Pacific Division; Rear Admiral Peter W. Marshall, Commander, NAVFAC, Pacific Division; and retired CEC Captains Charles M. Maskell, Malcom T. Mooney, Norman W. Petersen, Robert R. Raber, and Alfred L. Wynn.

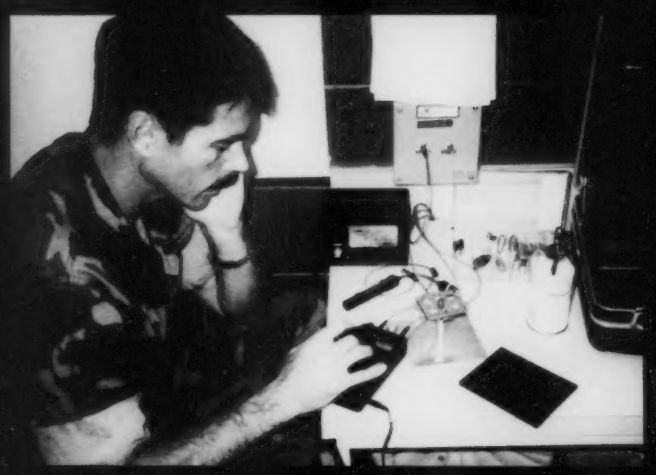
Nash took note of PWC San Franciso's team effort over the last couple of difficult years, citing their professional pride and skill at remaining an effective team over the course of their journey.

"Thank you all for your service and dedication," Nash said. "It has been an honor to serve with you." He closed with a quote from former President of the United States Thomas Jefferson, "I like the dreams of the future rather than the histories of the past."

The final entry ending operations was made to the log book, the flags were lowered, and everyone exited the gate for the last time.

N. Scott Sutherland is the public affairs officer at Public Works Center San Diego, Calif.

(Left to right) Harvey "Red" Nodine, former customer services representative and the last Federal Managers Association president of the PWC SF chapter; Norma Olsen, comptroller staff and senior plankowner (47 years); and Lawrence Williams, senior civilian with 52 years of service, present PWC San Francisco's colors to CAPT Christensen for retirement.



CE1 Belding tests an "ST" optical termination using an optical power meter. (Photos by CE1 (SCW) P. Johnson)

CE1 (SCW) Brumfield installs filled splice sleeves on textile insulated conductors.

CE2 Waisome inspects an optical fiber for scratches.

Advanced cable splice training

By CECS (SCW) P. Foley

Commanding officers, officers in charge, public works officers and training officers: Due to budget cuts, your training account balance is ZERO. Continue mission.

In light of fiscal realities, we should all breathe a sigh of relief that we have not seen that headline to date. However, if you want to maximize your training budget and get the most for your training dollars, consult your Catalog of Navy Training Courses (CANTRAC) NAVEDTRA 10500, for Naval Construction Force, C1 Advanced and Special Construction Battalion Training Courses offered at Naval Construction Training Center (NCTC) in Gulfport, Miss.

Why NCTC Gulfport?

In addition to favorable year-round golfing weather, world famous Southern hospitality, entertainment and great food, NCTC Gulfport is centrally located along the Mississippi Gulf Coast in the continental United States.

NCTC is the sole location for the Power and Communication Cable Splicing Course (CIN A-721-0023), a rigorous nine weeks of classroom, laboratory, and hands-on-training which awards graduates with Naval Enlisted Classification (NEC) 5644.

Keeping up-to-date with technology is NCTC's biggest challenge. Industry has dramatically changed the face of communication since the first cable class was conducted in 1975. What is current today may be obsolete tomorrow. NCTC instructors spend considerable time researching material, attending classes, and following technology to keep up with today's market.

Communicating through fiber optics has become more popular, increasing the demand for trained splicers. Since the introduction of fiber optics into the course in 1991, it remains the high point of training for students. Splicing two pieces of glass, less than one third the thickness of a sheet of paper, is an accomplishment for even the sharpest eyes. Both mechanical and fusion technology, used for splices and terminations, are taught during the 10 days of fiber optic training.

Department of Defense installations throughout the world are equipped with telephone cable; though older and not as advanced as fiber optics, it must still function and be repaired. Making splices in telephone cable is a challenge. Seeing hundreds, or even thousands, of tiny wires can be an overwhelming experience—not so for NCTC graduates. Our course teaches how to identify and count the wire pairs and splice them with professional results. You don't want to call California and end up connecting with Moscow.

It is difficult to teach these skills out of a book, which is why this course expends 76 percent of training time in the labs. Student guides and splicing prints are issued for each splice, allowing the students to follow a step-by-step guide while developing the skills required of the NEC. The prints give all the details needed to successfully build a splice, although the techniques of handling optical fibers, telephone pairs and "pulling tape" on high voltage splices can only be perfected once students have completed hours of hands-on-training and practice.

High voltage, underground power cable is the mainstay of the course. High voltage cable splicing techniques have come a long way. The time-tested, all tape splices are still alive and well, but make way for innovative ways to do the same job.

Cold shrink, pre-molds and modular kits are just a few of the newer splices taught throughout the power phase of instruction. The students make 17 splices and terminations ranging from 5KV to 15KV, testing each at 300 to 500 percent of its rated capacity. The testing portion of high voltage splices always generates keen competition within the class. Upon completion of this phase, students are proficient at "pulling tape" and building any splice in today's industry.

If you are interested in this course or others offered at NCTC Gulfport, you can receive class quota information through the Bureau of Naval Personnel (PERS-401C) or the 20th Naval Construction Regiment, Gulfport, Miss. You can also call NCTC at DSN 868-2608 or 601-871-2608. We look forward to seeing you in class!

CECS (SCW) P. Foley is the A/B Company Commander at Naval Construction Training Center, Gulfport, Miss.

Seabees among first at KAL crash scene

By JO3 Anthony J. Falvo
JO2 Michael Mitchell

In the early morning hours of Aug. 6, 1997, Korean Air Lines (KAL) Flight 801 crashed while approaching Guam International Airport.

After receiving the initial call from the Commander, Naval Forces Marianas duty officer at 3:10 a.m., Naval Mobile Construction Battalion (NMCB) 133 personnel, along with two backhoes, were quickly dispatched to the remote crash site atop Nimitz Hill, three miles from the airport runway.

The burnt out fuselage lay in a ravine several hundred yards from the nearest point of access, which forced volunteers to negotiate steep hills of muddy, rain soaked clay to search for victims. The smell of smoke and burning jet fuel filled the fresh morning air as rescuers and support teams worked feverishly to assist the passengers and crew aboard Flight 801. The backhoes, and later a bulldozer, cut a path to the twisted wreckage where teams soon followed to provide aid and medical assistance to survivors. NMCB 133's medical officer, Lieutenant Andrea Prince, Chaplain Lieutenant Dean Hoelz and a small battalion medical team were among the first to arrive on the scene. "We went down to the fuselage with a medical team from Anderson Air Force Base and Guam Memorial Hospital where two survivors were found under some of the dead...we had the two survivors quickly hoisted up to the litter bearers where they were then heloed out," said Prince.

After six more bodies were pulled from the wreckage, the medical team was dispatched to set up a morgue tent. Security was established around the tent and a team began the process of tagging and identifying those who were found and pulled from the crash.

As the day wore on, the battalion's mission switched from one of rescue to one of support and preparedness. Crews worked into the night and the next morning building an access road and clearing an area for the investigation command post. Additionally, battalion crews set up a five tent camp, complete with lighting and generators.

Three days later, NMCB 40 arrived on their scheduled deployment date to relieve NMCB 133. "Six hours after we touched ground, we were on the crash site with our equipment and a crew of eight personnel," explained Equipment Operator 1st Class Sam Marotta. NMCB 40, Alfa Company, expanded the narrow dirt road first cut by NMCB 133 and brought in roughly 4,000 cubic yards of six-inch rock, making a solid platform from which heavy equipment and rescuers could work. One of the many conditions they had to deal with was Typhoon Winnie passing off the coast of Guam. "For seven days straight it rained on us everyday," said Marotta. Additionally, 25 m.p.h. winds caused the thin skin of the aircraft to tear off and soar like flying razor blades.

Further complicating the project was the risk of biological contamination as volunteers continued the emotionally straining work of victim recovery. "The number one hazard was the health hazard. At all times you had to have a mask on and gloves had to be changed constantly. Dealing with the heavy equipment, working in that environment for the many hours, sometimes 10 to 15 hours straight. Most of us out there had never experienced anything like that," Marotta continued.

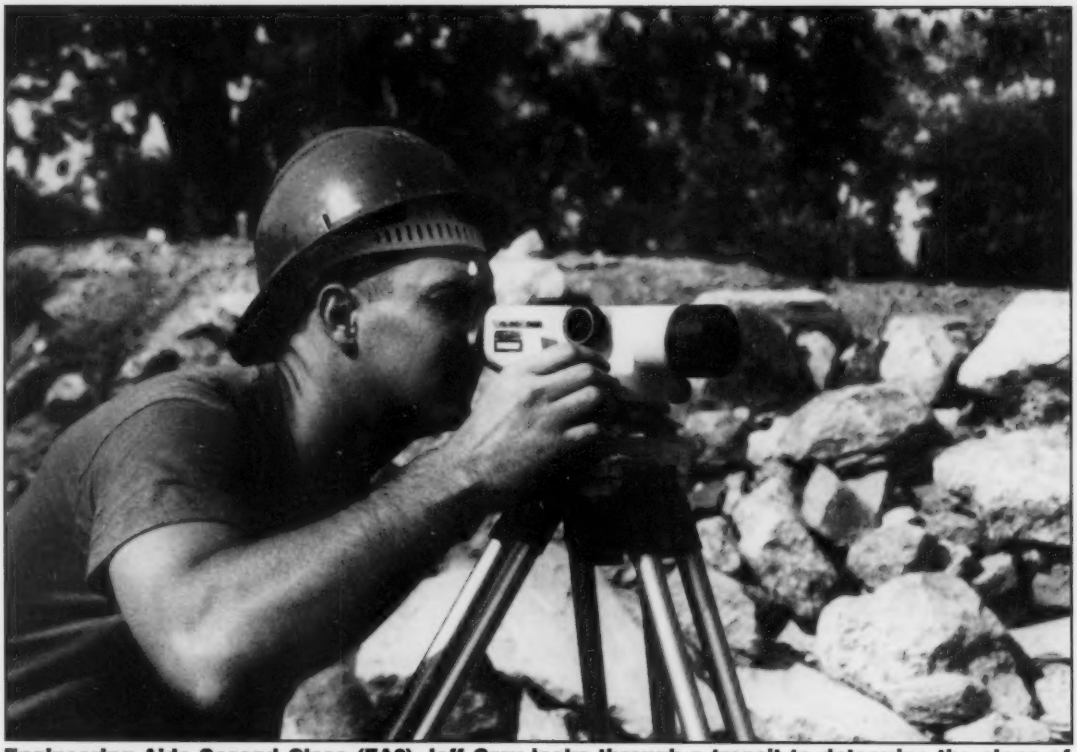
Another aspect of the job, and no less important, is caring for the people involved in the cleanup of disasters such as the KAL crash. A Special Psychiatric Rapid Intervention Team, known as SPRINT, was dispatched by the U.S. Navy to help recovery teams deal with potential lasting emotional issues. SPRINT members conducted debrief meetings to educate personnel in dealing with emotional stress resulting from exposure to the crash site.

Naval mobile construction battalions train to deal with contingency operations while in homeport, and disaster relief is a big part of that training. Crews from both NMCB 133 and NMCB 40 put that training to the test in a real time situation by providing invaluable assistance with the crash of KAL Fight 801.

JO3 Anthony J. Falvo is assigned to NMCB 133, while JO2 Michael Mitchell is assigned to NMCB 40.

The wreckage from KAL Flight 801 was broken into two large sections with smaller debris scattered over a wide area. (Photos by JO2 Michael Mitchell)

The burnt out fuselage lay in a ravine several hundred yards from the nearest point of access.



Engineering Aide Second Class (EA2) Jeff Gray looks through a transit to determine the slope of the boat ramp. (Photos by Daryl Smith)

Seabees rebuild Bowdoinham waterfront

By Daryl Smith

Some of the residents of Bowdoinham, Maine, had their doubts that anything would ever be done to improve their deteriorated waterfront. But when the parade of Seabee heavy equipment rumbled across the bridge over the Cathance River and into the tiny town on June 14, 1997, it was apparent that something big was about to happen.

Reserve Seabees from Naval Mobile Construction Battalion (NMCB) 27, based at the Brunswick Naval Air Station, took on the project of renovating Bowdoinham's public boat launch area. The project involved regrading the boat ramp and about 1,000 feet of shoreline and covering the banks with erosion control fabric and large stones. A boat mooring dock was also relocated, and a parking lot was built, including handicap spaces.

The five-week project was funded through the Civil-Military Readiness Training Program, which allows certain public construction projects for communities to be performed as military training. Although the town provided money for materials, the Seabee labor saved the town about $72,000.

The project originated in 1995 when townspeople

noticed that the old wooden bulkhead had deteriorated badly and posed a safety hazard, especially to children. The water had eroded the river bank behind the bulkhead, leaving deep holes. "A kid could slip down behind the bulkhead and be lost," said Leslie Verrill, chairman of the town's waterfront committee.

The other problem, which had been apparent for years, was the boat ramp, which was too steep and could not allow boats to be launched at low tide because it was not deep enough. The Seabees regraded the ramp to make it wider, longer and deeper and to give it a more gradual slope. The new boat launch also includes a floating handicap access ramp. Concrete planking was installed at the bottom of the boat ramp, while the sides of the ramp were landscaped with stones.

Because down river is a favorite fishing ground for striped bass, the Bowdoinham ramp is a convenient spot for many recreational fishermen to launch their vessels and is an important part of the town's livelihood. "People will be able to launch a boat at any time now," Verrill said. "That will be the biggest benefit to the community." He explained that small businesses like the local grocery store, restaurant, bait shack and gas station will benefit from the improved facility because boaters will not have to wait for the tide anymore.

Ironically, the tide presented the Seabees their biggest challenge. In order to work on the river bank, the Seabees had to adjust their schedules to work when the tide was low. They had to start work as early as 3 a.m. and sometimes worked as late as 9 p.m.

"Time and tide wait for nobody," commented Builder First Class (BU1) Dan Newton, officer in charge of the project. However, the picturesque location and friendliness of the local residents made the hard work and long hours worthwhile, Newton said.

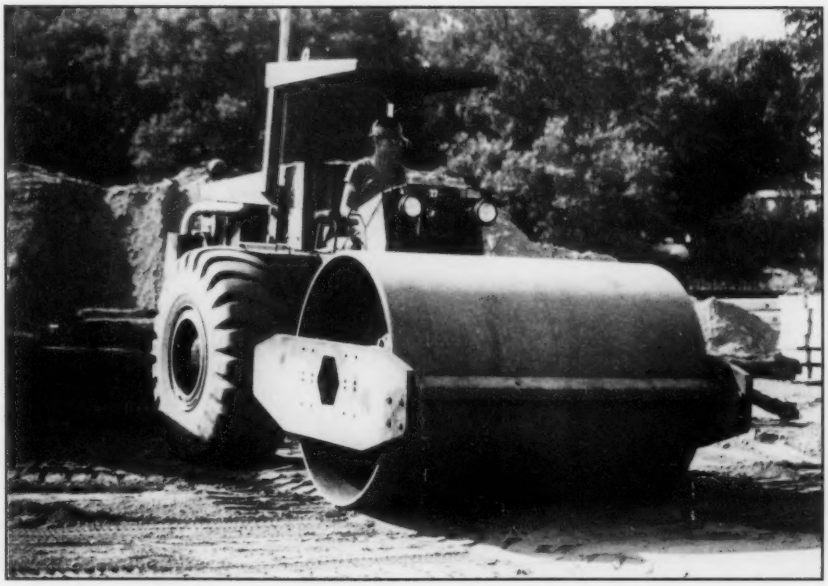
The Seabees also had to adjust to unforeseen changes. When water seepage was noticed near the boat ramp, the Seabees uncovered an old drainage pipe that was not on any of the drawings. They quickly devised a plan to divert the water flow to another area that would not affect the ramp. Verrill said that such unanticipated problems would stop most contractors in their tracks, but the flexibility of the Seabees in making minor alterations kept the project forging ahead.

"This is a project with a lot of heart," said Lieutenant Jessie Mills, Continental U.S. Projects Officer at the Second Naval Construction Brigade. "It addresses the spirit of what the Civil-Military Program stands for, which is bringing people together, military and civilian, to meet a common goal." He added, "This project exemplifies proper planning, coordination and the execution necessary to produce good quality Seabee work."

Because of the town's rich seafaring heritage, the Seabee crew thought it was only fitting that the Navy be involved in the Bowdoinham project. Its shipbuilding history began well before the Revolutionary War. By the 1850's, the town was the foremost builder of wooden ships in Maine. However, by the 1860's the town's fortunes began to decline as shippers turned toward large clipper ships and steamers, which were too big to be built in Bowdoinham. Its last ship was launched in 1912.

Like the rising and receding tides of the Cathance River, the town of Bowdoinham has seen its fortunes come and go. With the construction of the new waterfront area, residents are hopeful that the tides have once again changed for the better for this little town on the river.

Daryl Smith is the public affairs officer for Commander, Second Naval Construction Brigade, Norfolk, Va.



Equipment Operator First Class (EO1) Carl Buckley smoothes out the parking lot area with a roller.

PWC designs new Norfolk Naval Station fishing pier

By Madison Montgomery

On January 9, 1996, Commander, Naval Base (COMNAVBASE), Norfolk, requested the engineering department of the Navy Public Works Center (PWC), Norfolk, to design a fishing pier in the Q-area of the Norfolk Naval Station.

Though the fishing pier was initially slated for design by an architectural/engineering firm, Frank Cole, director of the civil/structural division of the engineering department, PWC Norfolk, decided to do the design in-house. PWC had the required expertise available to execute a quality design on a tight schedule and meet the customer's expectations.

The fishing pier configuration was developed by structural engineers Eddy Theisz and Dean Gregory. They chose to construct the pier with precast concrete piles and precast concrete deck sections 60 feet long.

A concrete pier was chosen because it could be constructed faster than a wooden pier and would require less maintenance and have a lower life-cycle cost. Theisz and Gregory also assisted COMNAVBASE's environmental department in obtaining the various permits required before construction could start.

The pier design began March 1, 1996, and was completed June 14, 1996, two weeks ahead of schedule. The pier structure was designed by Eric Allen to resist wave forces that could occur in Willoughby Bay during a 100 year storm event. Allen's construction cost estimate for the pier varied less than 0.5 percent from the lowest competitive bid.

Architects Richard Rogers and Robert Jones designed a concrete gazebo with a steel framed roof support and a standing seam metal roof to sit at the end of the pier. Initially, a timber gazebo was proposed, but a concrete gazebo is more consistent with the desire to have a low maintenance structure. The gazebo is also a stunning focal point on the pier.

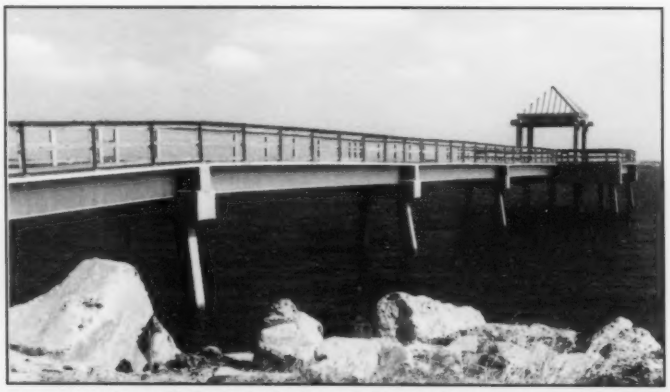
Kirby Foytik, the project's electrical engineer, designed the navigational light at the end of the pier.

The civil engineering design was done by Cheryl Wakeman and Donnie Bennett. Their survey was instrumental in siting the pier so that obstructions along the shoreline could be avoided while minimizing the length of the pier approach.

Soundings to determine the depth of the water at the project site were done by Bob Starke and the hydrographic survey branch. The soundings helped in siting the end of the pier in the deepest possible water.

The fishing pier is 317 feet, 6 inches long, with 213 feet of the pier extending into Willoughby Bay, and 10 feet wide, with a 40 by 40 foot section at the end of the pier that supports the gazebo. The pier has wooden hand rails with galvanized steel posts.

The fishing pier has four areas with lowered hand rails to facilitate fishing by persons with disabilities.



The new Norfolk Naval Station fishing pier, designed by PWC Norfolk, is attractive, durable and virtually maintenance free. It's a source of relaxation and recreation to area citizens, the military and their families. (Photo by John Land)

The contract to construct the pier was awarded to Marine Contracting Corporation on August 30, 1996. In spite of harsh working conditions on the waterfront, the contractor completed the pier on June 16, 1997.

"This is the fastest project from concept to execution that I've ever been involved with," said Commander Kenneth Moncayo, base civil engineer, COMNAVBASE. "There was great cooperation from engineering and public works and great cooperation from the resident officer in charge of construction."

The success of the project was a result of teamwork. A team of skilled professionals worked together toward a common goal: to provide area citizens, the military, and their families a source of recreation and relaxation.

Madison Montgomery works in the engineering department for Public Works Center Norfolk, Va., and was the project manager for the fishing pier.

38 Complete Basic Training at CECOS

Thirty-eight members of basic class number 212 graduated from the Naval School, Civil Engineer Corps Officers, Port Hueneme, Calif. Course work is comprised of eight weeks of specialized training pertinent to the Navy's needs for shore installation engineering, public works management, construction contracting and administration, and Seabee operations.

Basic Class 212

Graduation: October 22, 1997

LT Ronald A. Barrett
BSOE / USNA
to PWC San Diego, Calif.

ENS Keith K. Benson
BSCE / Norwich Univ.
to NMCB Three, Port Hueneme, Calif.

ENS Karin H. Berzins
BSCE / USC
to NMCB Five, Port Hueneme, Calif.

ENS Jennifer L. Bossler
BSCE / Penn. State
to PHIBCB One, San Diego, Calif.

ENS Michael J. Brady
BS Marine Eng. / USNA
to NAVCOMMSTA, Keflavik, Iceland

ENS John D. Brubaker♦
BSCE / Univ. of S. Florida
to NAVSTA Washington, D.C.

ENS Jay M. Cavnar
BSCE / Kansas State
to EFD NORTH Cont. Off., Brunswick, Maine

ENS Mallory M. Cawfield♦
BSOE / USNA
to PWC Norfolk, Va.

ENS James J. Cho
BSCE / Univ. of Michigan
to Camp Smedley D. Butler, Okinawa, Japan

ENS David Colon
BS Env. Eng. / Univ. of Florida
to PWC Pensacola, Fla.

ENS Michael A. Comstock
BSCE / Univ. of Nevada
to NAS Kingsville, Texas

ENS James P. Crowe
BSCE / Univ. of Mississippi
to NMCB 133, Gulfport, Miss.

ENS Miguel Dieguez
BSME / USNA
to NMCB 40, Port Hueneme, Calif.

LT William C. Duerden
BSOE / USNA
to NAVMEDCEN, San Diego, Calif.

LT Juan C. Garcia
BSEE / MIT
to LANTDIV Cont. Off., PRA, Roosevelt Roads, P.R.

ENS Manuel A. Hernandez
BSME / Florida Intl. Univ.
to NAVAIRWARCENWPNDIV, China Lake, Calif.

ENS Jerry L. Johnson
MSME / Tuskegee Univ.
to SOUTHWESTDIV Cont. Off., Camp Pendleton, Calif.

CW02 William M. Johnson♦
to UCT One Norfolk, Va.

LT Jason R. Karlin
BSAE / Univ. of Kansas
to EFD NORTH Cont. Off., Portsmouth, N.H.

ENS Jody P. Lapham
BSCE / Penn. State
to NMCB Four, Port Hueneme, Calif.

LT Chad H. Lee
MSFM / Naval Postgraduate School
to PWC Great Lakes, Ill.

ENS Sara A. Loughead♦
BSME / USNA
to NMCB One, Gulfport, Miss.

ENS Gerald C. Lowe
BSCE / Tenn. Tech. Univ.
to EFD MED Cont. Off., Naples, Italy

ENS Thomas B. McLemore
BSOE / USNA
to PHIBCB Two, Little Creek, Va.

ENS Christopher P. Neish
BSME / USNA
to EFA CHES Cont. Off., Dahlgren, Va.

ENS Michael P. O'Donnell
BSCE / George Mason Univ.
to NMCB 74, Gulfport, Miss.

LT Shaugn E. Ostrowski
BSEE / Univ. of Florida
to LANTDIV Cont. Off., Portsmouth, Va.

ENS Jeffery M. Pfeil
BSCE / Old Dominion Univ.
to NAVSUPPACT, Souda Bay, Greece

ENS Joshua F. Powell
B Arch. / Univ. of Oregon
to OICC Far East, Yokosuka, Japan

LT Stephen K. Reveles♦†‡
BSAE / Univ. of Virginia
to SOUTHWESTDIV, San Diego, Calif.

ENS Brian B. Roberts
BSCE / Univ. of Tennessee
to EFA NW, Poulsbo, Wash.

ENS Matthew L. Taliaferro
BSCE / Oregon State
to EFA CHES, Washington, D.C.

ENS Mark I. Tipton
BSCE / Clemson Univ.
to EFA NW Cont. Off., Adak, Alaska

LT Scott W. Waltermire♦
MSME / Naval Postgraduate School
to NAVSUPPACT, Monterey, Calif.

ENS Robert S. Wells♦
BSCE / Univ. of Arizona
to NMCB Seven, Gulfport, Miss.

ENS Jennifer V. Whitmore
BSOE / USNA
to NAS Whiting Field, Milton, Fla.

ENS John V. Wicklund IV
BSME / USNA
to NAVSUPPOFF, La Maddalena, Italy

ENS John R. Withers
BS Chem. Eng. / Univ. of Idaho
to OICC Marianas, Guam

♦ With Distinction
† Class Commander
‡ First in Class

Reserve officers

These reserve officers were part of basic class 212 during the period September 8, 1997 through September 24, 1997.

ENS Arturo A. Aseo
BSCE / Univ. of the East
to NCFSU Two, Port Hueneme, Calif.

LTJG Heather N. Brown
MEA / Virginia Tech.
to NMCB 21, Lakehurst, N.J.

ENS Troy B. Dover
BSCE / N. Carolina State
to NCFSU Three, Raleigh, N.C.

ENS John S. Hurlburt
MS Env. Eng. / USC
to CBMU 303, Sacramento, Calif.

ENS Michael Jorgensen
BSEE / Univ. of Wash.
to NMCB 23, Pittsburgh, Pa.

ENS Jerome A. Kamowski
BS / Bluefield State
to NMCB 24, Charleston, W.V.

ENS Brian L. McNew
B Arch. / La. Tech. Univ.
to NMCB 28, Barksdale AFB, La.

ENS Charles R. Nash
BSEE / Washington State
to NMCB 18, Tacoma, Wash.

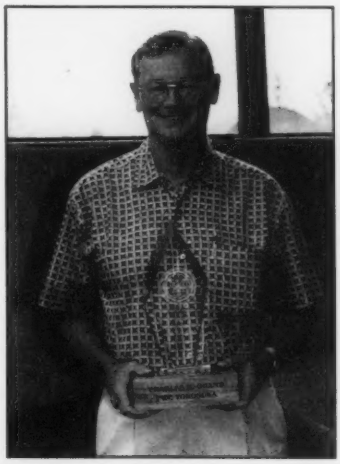
ENS David S. Smith
BSCE / Clemson Univ.
to NMCB 14, Jacksonville, Fla.

ENS Christopher L. Thomas
BSME / Univ. of Arizona
to NMCB 17, Tucson, Ariz.

Transportation Fleet Manager of the Year

The first annual Navy Transportation Fleet Manager of the Year Award was presented to Charles B. Grant of Public Works Center Yokosuka, Japan.

This award recognizes individual accomplishment and excellence in the area of Navy Civil Engineering Support Equipment (CESE) fleet management.



Charles B. Grant

Grant's major accomplishments included developing a plan to lease-to-purchase 10 new buses and buy 18 used buses, with limited OPN dollars, to support the Department of Defense schools' student transportation. The plan ultimately decreased maintenance costs and bus downtime and increased the quality of bus service. In addition, Grant's involvement in the "Cost-Cutter" program enabled him to identify more than $500,000 of potential transportation savings for major customers.

NSWC signs $15 million contract

The Naval Surface Warfare Center (NSWC), Crane Division, Crane Indiana, signed an Energy Savings Performance Contract (ESPC) valued at approximately $15 million that will provide them with the ability to develop energy efficiency projects over the next three to five years at no capital cost to the Department of the Navy (DON). This first-of-its-kind agreement between the Naval Facilities Engineering Command Contracting Office (NAVFACCO), Port Hueneme, Calif., and ERI Services, Inc., of Bridgeport, Conn., represents a major step forward in DON's use of third-party financing for energy projects.

ESPC is a vehicle whereby the contractor incurs the cost of implementing energy saving measures in exchange for a share of any energy cost savings resulting directly from the implementation of such measures during the term of the contract.

At a ceremony held to acknowledge the cooperative team effort which made this contract a reality, Crane energy manager Larry Cullop stated, "This method of contracting allows DON to make much needed utility infrastructure improvements designed to reduce energy consumption and costs while simultaneously freeing funds to meet mission requirements. In addition, we now have in place a blueprint for this type of contracting for other DON facilities to follow."

Under the terms of the first delivery order valued at approximately $2 million, ERI Services, Inc., will enhance the energy efficiency of 46 buildings totaling 400,000 square feet by installing a direct digital control system, upgrading the steam distribution system, improving and replacing boilers, and providing turnkey maintenance and repair. It is estimated that these improvements will reduce energy consumption 7.4 percent, saving approximately 58.6 billion Btu per year.

ERI Services, Inc., will recoup its investment through audited energy and maintenance/repair cost savings over a 20-year contract period. The terms of subsequent delivery orders will be independently developed and negotiated as energy conservation measures offering optimum payback and energy savings are identified.

Naval Facilities Engineering Command has chartered a team of individuals to centralize Navywide use of ESPC with a goal of awarding three contracts per year.

DON's energy program is saving millions of taxpayers' dollars, improving quality of life through increased energy and water efficiency, and is well on its way to achieving the conservation goals established by the President and Congress.

Over the past decade, Navy and Marine Corps shore facilities have avoided more than $300 million in energy costs through improved energy efficiency.

NAVFAC-CERF sign MOU

The Naval Facilities Engineering Command (NAVFAC) and the Civil Engineering Research Foundation (CERF) signed a Memorandum of Understanding (MOU) aimed at improving the climate for fostering research to advance technologies in the design and construction of environmentally sustainable facilities and cleanup.

The NAVFAC-CERF MOU will enable the two orga-

nizations to better work in collaboration with industry and academia toward overcoming the many barriers facing research, development and commercialization of building, construction, and environmental technologies and innovation within the fragmented design and construction industry. The Navy will utilize CERF to service the construction industry through studies, clearinghouse and linking functions. CERF plans to work with the Navy on programs that will be beneficial to the industry, as well as to Navy and national policies. Since risk and liability are some of the most difficult barriers to innovation, the two organizations will work together with other sectors of the industry to promote research, continuing education, and training to overcome the insufficiencies in technical information that limit commercialization of innovative ideas and practices where they are most needed.

RADM Nash signs MOU with CERF President Harvey M. Bernstein.

PWC San Diego wins quality award

Public Works Center, San Diego was one of two organizations to receive a Significant Achievement Award for its efforts in process reengineering, the highest award given at a banquet sponsored by the San Diego State University (SDSU) Institute for Quality and Productivity during the fifth annual Team Excellence Recognition and Showcase on 12 December.

"This is an exceptional effort by the people who really understand the business, our process owners and their customers," said Captain Andrew Brunhart, PWC's Commanding Officer.

The mission of the Team Excellence Recognition and Showcase is to promote, encourage and recognize the efforts of teams in the San Diego business community using a systematic quality improvement process which includes peer recognition and mutual learning through a public showcase for successful teams. This is the second year in a row that a team from PWC received a Significant Achievement Award from SDSU's Institute for Quality and Productivity.

PWC Pearl wins state excellence award

The Navy Public Works Center Pearl received a 1997 Hawaii State Award of Excellence, White Lei Award, from Hawaii Governor Benjamin J. Cayetano at a luncheon on Oct. 22. The White Lei Award is one of four levels of awards given to businesses committed to becoming quality organizations.

CAPT James L. Delker receives the White Lei Award from Governor Benjamin J. Cayetano.

Captain Jim Delker, PWC Pearl's commanding officer, accepted the award from Governor Cayetano on behalf of PWC Pearl's 1,500 employees.

"I would like to acknowledge everyone at the center who worked so hard for the achievements we've made," said Delker. "I'd especially like to thank my predecessors, Rear Admiral Dave Nash and Captains Jim Rispoli and Fred Dew, who set the tone at PWC and my executive steering group who made the bold decision to apply for the award."

The Hawaii State Award of Excellence is modeled after the Malcolm Baldridge National Quality award. Its mission is to continually raise the level of excellence in the Hawaiian business community while perpetuating all that is unique to the islands and its people.

SOUTHWESTDIV wins quality award

Naval Facilities Engineering Command, Southwest Division (SOUTHWESTDIV), was one of 16 quality award recipients honored on Nov. 21, at a banquet in San Diego.

The command's Southwest Region received a Bronze Level Eureka Award from the California Council of Quality and Services (CCQS) for its quality efforts. This is the second year in a row that SOUTHWESTDIV has been honored. The CCQS awards are based on the national Malcolm Baldridge Award for accomplishment of quality goals in leadership, information and analysis, strategic planning, human resources, process management, business results, and customer focus and satisfaction.

Captain Tom M. Boothe, Commander, SOUTHWESTDIV, accepted the award on behalf of his command noting that his employees, through their quality efforts, have served the taxpayers well by improving business practices, reducing costs and increasing their customers' satisfaction level.

Dalton praises first custom-designed facility

On Jan. 6, 1998, a ceremony was held at the Space and Naval Warfare Systems Center in Charleston, S.C., to celebrate the Navy's first custom-designed, new construction facility which will provide warfighters with the cutting edge Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) technology they need to effectively deploy and defend their forces and to use their weapons in modern warfare.

Naval Facilities Engineering Command, Southern Division, Charleston, S.C., managed construction of the $26.5 million facility which took three years to build. The Space and Naval Warfare Systems Center owns and operates the new facility for the Navy.

The 256,000-square-foot engineering center is the size of five and a half football fields, is hurricane proof, and rests on 4,262 densified stone columns to resist earthquakes.

Secretary of the Navy John H. Dalton, South Carolina Senator Fritz Hollings (whose name the new facility will bear), and other Navy officials cut the ribbon to officially receive the facility for the Navy.

In his remarks, Secretary Dalton praised the efforts of the entire Navy team. He indicated that a glance at the literature and mission statements for the Hollings SPAWAR Systems Center "shows all that is right with the Navy's outlook on budgeting, acquisition, procurement and staffing for our critical defense needs. You will see words like efficient...secure...multi-purpose...coordinated...flexibly-configured...and quality of life."

NAVFAC selects 1997 Engineer of the Year

The Naval Facilities Engineering Command (NAVFAC) has named Leslie A. Karr of the Naval Facilities Engineering Service Center (NFESC) as its Engineer of the Year for 1997.

Karr is the science and technology team leader for NFESC's environmental restoration development branch where she guides the development and demonstration of innovative, cost effective technologies for the Navy.

Leslie A. Karr

Karr was the first to conduct comprehensive assessments of the Navy and Marine Corps small arms firing ranges to determine whether lead contamination posed a human and environmental health risk. With this information, a treatment technology for lead contaminated impact berms was developed. She also initiated and oversaw development of an engineering prototype for a rapid, on-site airborne lead analyzer when she found no method available for her team to use.

Her team developed a state-of-the-art leak detection system for the primary drinking water aquifer for Honolulu and Pearl Harbor. Implementation of this technology throughout the Department of Defense is anticipated to save more than $500 million in compliance and future cleanup avoidance costs.

Karr's landfill capping technology, which uses a water-harvesting design, reduces the amount of percolation and subsequent leachate generation in landfills. This method is less expensive than current methods by a factor of 10-100, depending on site conditions.

Finally, she has been a key person in the development and success of the Navy's Hydrocarbon National Test Site. Part of a federal initiative, the Navy was tasked with demonstrating innovative technologies for treating petroleum hydrocarbons and transferring those technologies to all federal agencies and industry. Karr is the test site liaison for federal, academic, regulatory, and industrial hydrocarbon remediation experts.

New NAVFAC directorate established

RADM David J. Nash presents a NAVFAC plaque to RADM Thomas J. Gross.

The Naval Facilities Engineering Command (NAVFAC) formally "stood up" its Contingency Planning and Reserve Programs Directorate on Dec. 12, at a headquarters ceremony in Alexandria, Va. Rear Admiral David J. Nash, Commander, NAVFAC, described the occasion as "a watershed in the history of the total force," adding that the combination of active and reserve communities in one command, "lets us focus our respective talents in a more coherent way."

The new directorate is headed by Rear Admiral Thomas J. Gross, a Selected Reserve Civil Engineer Corps officer. His staff is responsible for NAVFAC's contingency planning role, which includes identifying engineer requirements and matching resources to those needs. The directorate also maintains the Navy's portion of the Department of Defense resource database and participates in the National Emergency Preparedness Liaison Program. Another important responsibility of the directorate is participating in the development of manpower, training and readiness policies which govern the Navy's nearly 12,000 reserve Seabees and civil engineers.

Some of the directorate's reserve program functions were previously performed by the Reserve Naval Construction Force Support Command, which was disestablished on Sep. 30.

The new Contingency Planning Directorate is now an integral part in the new organization and a direct link to the other half of the "seamless force."

Have you considered the reserves?

If you are a young construction professional in civilian practice or civil service, or are a graduating engineering or architecture college senior who has already selected a career path, the reserve Civil Engineer Corps may have a place for you. Qualified young professionals have the chance to achieve tremendous personal and professional satisfaction through:

- Direct appointment as an ensign, Civil Engineer Corps, U.S. Naval Reserve
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